Acquisition Software Oversight

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On March 23, 1999, Dr. Jacques Gansler, the Under Secretary of Defense (Acquisition and Technology), added acquisition software oversight, along with management oversight for the Software Engineering Institute (SEI), to my other responsibilities as Deputy Under Secretary of Defense (Science and Technology). Given that half of software projects double their original cost estimates, projects slip an average of 36 months, and one third of software projects are cancelled, I think this new role is one not only challenging, but especially critical to providing new and upgraded warfighting capabilities to our warfighters.

Software is pervasive. It truly is the new physical infrastructure. We are more dependent on software than ever, and software is becoming more complex. In our weapon and support systems, it is the source of enhanced functionality, the key to system modernization, the technology we use to model new system concepts, and the basis of our advanced simulation-based training and doctrine development. It is our competitive edge that enables our systems to interoperate in new and novel ways.

In my keynote talk at the Software Technology Conference (STC) on May 3, I outlined four areas in which I intend to focus. My first focus area is discipline. We know the components of good software development practice; requiring discipline in every step of this process is necessary. One way to do this is to use the SEI's Capability Maturity Model for Software. We also know what kinds of metrics to collect and how to use them to manage software development and acquisition efforts. One example is the practical software measurement initiative. And we have many Department of Defense (DoD) organizations that are dedicated to providing the DoD acquisition community with software engineering expertise. One example is the parent organization of *CrossTalk*, the Software Technology Support Center. Collectively we need to insist on disciplined approaches to acquire our software-intensive systems.

My second focus area is collaboration. I have asked SEI to organize a workshop for the DoD organizations that are involved in improving the DoD's collective ability to acquire software. I was initially aware of five to eight groups, and was surprised and delighted to find that approximately 30 organizations have stepped forward. This group of organizations provides a baseline capability to share information, facilitate use of common products and services, and recommend policy improvements that will help us all. We need to view ourselves as a community and work together as a community to improve.

My third area of focus is workforce development. We are fortunate to have a dedicated and talented workforce. This was made evident to me by the large number of attendees at STC this year and in my side meetings. I want to help ensure that our workforce is able to receive the professional and continuing education it needs to stay current. I also am very concerned that the DoD has the ability to act competitively in hiring and maintaining a world-class group of professionals. People are our strength, and that is an asset that needs our attention and commitment.

My final focus area is science and technology. In addition to my software role, I also manage the DoD's science and technology programs. The rapid rate of advancement in technology and the unique issues faced when introducing those new technologies into our organizations and systems is a familiar challenge. I hope to make those technologies available to the software community as rapidly as possible. I also believe that a focused investment in science and technology based on the needs of the DoD software engineering community is mandatory to help us continue to improve.

I am committed to working with you to improve our collective ability to acquire software-intensive systems on time, within cost estimates, and with the desired functionality. I am pleased to see that this issue of *CrossTalk* is focusing on acquisition. ◆

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